

IN THE CLAIMS:

Please **AMEND** claims 1, 12, 14, and 16-26, and **CANCEL** claims 6 and 7 without prejudice or disclaimer, in accordance with the following:

1. **(CURRENTLY AMENDED)** A method of recording data on an optical recording medium, the method comprising:

generating channel modulated digital data;

generating a recording waveform having an erase pattern containing a multi-pulse of pulses having corresponding low and high powers, and a recording pattern in response to the channel modulated digital data; and

forming a first level of the channel modulated digital data as a mark and forming a second level of the channel modulated digital data as a space by using the generated recording waveform,

wherein the generating of the recording waveform comprises causing a power level of a ~~pulse-period~~ between an end point of the erase pattern and a start point of the recording pattern to be the high ~~level-power~~ of the multi-pulse and a power level of a leading pulse of the erase pattern to be the low power level or the high ~~level-power~~ of the multi-pulse.

2. **(ORIGINAL)** The method of claim 1, wherein the generating of the channel modulated digital data comprises: performing a Run Length Limited (RLL)(2, 10) method.

3. **(ORIGINAL)** The method of claim 1, wherein the generating of the channel modulated digital data comprises: performing a Run Length Limited RLL(1, 7) method.

4-5. **(CANCELED)**

6-7. **(CANCELED)**

8. **(ORIGINAL)** The method of claim 1, wherein the generating of the recording waveform comprises: causing a ratio of a duration time of a high level and another duration time of a low level of the multi-pulse to be substantially 1:1.

9. **(ORIGINAL)** The method of claim 8, wherein the generating of the recording waveform

comprises: causing the duration time of the high level to be half a clock cycle.

10. **(ORIGINAL)** The method of claim 8, wherein the generating of the recording waveform comprises: causing the ratio of the duration time of the high level and the duration time of the low level of the multi-pulse to be $m:n$ where m and n are integers.

11. **(ORIGINAL)** The method of claim 1, wherein the generating of the channel modulated digital signal comprises: forming a first level of an NRZI data signal as the mark and a second level of the NRZI data signal as the space.

12. **(CURRENTLY AMENDED)** The method of claim 11, wherein the generating of the recording waveform comprises: forming a cooling pulse as a part of the erase pattern, the cooling pulse having a cooling power below the low power of the multi-pulse.

13. **(ORIGINAL)** The method of claim 12, wherein: the generating of the recording waveform comprises: upon determining whether an ending time of the cooling pulse is less than or greater than $0.5T_s$ from a trailing edge of the NRZI data signal, causing a duration time of a leading pulse forming the erase pattern to be over $0.5T_s$.

14. **(CURRENTLY AMENDED)** The method of claim 13, wherein the generating of the recording waveform comprises: forming the period a unit pulse of the multi-pulse to have a the high level power and a the low level power that are adjusted by the according to the duration time of a the last pulse of the leading pulse forming the recording pattern multi-pulse.

15. **(ORIGINAL)** The method of claim 1, wherein the generating of the recording waveform comprises: forming the recording pattern having at least two power levels.

16. **(CURRENTLY AMENDED)** The method of claim 1, wherein the generating the recording waveform further comprises generating a cooling pulse concatenating the recording and erase patterns, in response to the channel modulated digital data, the cooling pulse having a power level below the low level power.

17. **(CURRENTLY AMENDED)** The method of claim 1, wherein:
the recording pattern contains another multi-pulse adjacent to the erase pattern, and

the generating the recording waveform further comprises adjusting ~~a first pulse~~ a power of the period between ~~of the another multi-pulse and the multi-pulse~~ according to a property of ~~the a trailing pulse of the multi-pulse~~.

18. (CURRENTLY AMENDED) The method of claim 17, wherein the power of the leading pulse of the erase pattern is equal to the power of the ~~first one of the multi-pulses of the recording pattern~~ period.

19. (CURRENTLY AMENDED) The method of claim 17, wherein the power of the leading pulse of the erase pattern is other than the power of the ~~first one of the multi-pulses of the recording pattern~~ period.

20. (CURRENTLY AMENDED) The method of claim 17, wherein the multi-pulse of the recording pattern further comprises a recording pulse having a recording power greater than the power of the ~~first one of the pulses of the recording pattern~~ period.

21. (CURRENTLY AMENDED) The method of claim 17, wherein the recording pattern further comprises a cooling pulse concatenating the recording and erase patterns and having a cooling power less than the power of the ~~first pulse of the recording pattern~~ period and the low level power of the multi-pulse ~~erase pattern~~.

22. (CURRENTLY AMENDED) The method of claim 1, wherein the generating of the recording waveform further comprises forming the recording pattern using a recording multi-pulse, and the power of the period between the multi-pulse and a first one of the recording multi-pulses of the recording pattern ~~having a power that is greater than the power of leading pulse of the erase pattern~~.

23. (CURRENTLY AMENDED) The method of claim 22, wherein the power level of the leading pulse of the erase pattern is equal to the power of the ~~first one~~ period of the multi-pulses of the recording pattern.

24. (CURRENTLY AMENDED) The method of claim 22, wherein the power level of the trailing pulse of the multi-pulses of the erase pattern is greater than the ~~power of the first one of the multi-pulses of the recording pattern~~ period.

25. **(CURRENTLY AMENDED)** The method of claim 22, wherein the generating of the recording waveform further comprises forming a cooling pulse concatenating the recording and erase patterns and having a cooling power less than the power of the ~~first pulse of the recording pattern~~period and the low power of the erase pattern.

26. **(CURRENTLY AMENDED)** A method of recording data on an optical recording medium, the method comprising:

generating channel modulated digital data;

generating a recording waveform having an erase pattern containing a multi-pulse of pulses having corresponding low and high powers, and a recording pattern in response to the channel modulated digital data; and

forming a first level of the channel modulated digital data as a mark and forming a second level of the channel modulated digital data as a space by using the generated recording waveform,

wherein the generating of the recording waveform comprises:

causing a power level of a leading pulse of the erase pattern to be the low power of the multi-pulse and a power level between an end of the erase pattern and a start point of a leading pulse of the recording pattern to be the low power of the multi-pulse, and

generating a cooling pulse concatenating the recording and erase patterns, the cooling pulse having a cooling power below the low power.